

April 1989

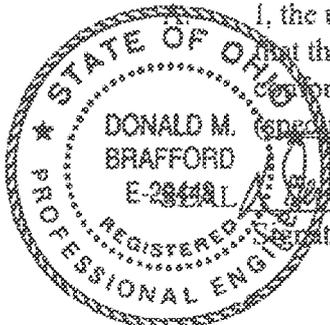
OHIO DEPARTMENT OF NATURAL RESOURCES
DIVISION OF RECLAMATION

CERTIFICATION 1

CERTIFICATION OF SEDIMENT CONTROL SYSTEM CONSTRUCTION

Permittee's Name AMERICAN ENERGY CORPORATION Permit D-0425

Complete both certification statements listed below.



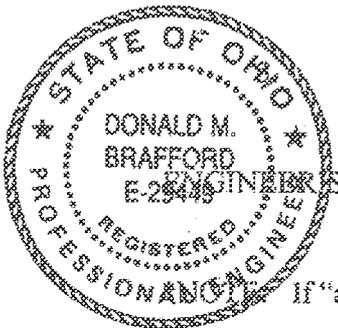
I, the undersigned, a surveyor or engineer registered in the State of Ohio, hereby certify that the measurements of the constructed sediment control system described below conform to the measurements contained in the approved original/"as built"* (specify one) design plan.

Donald M. Brafford Signature Title P.E. Date 7-31-02
(engineer/surveyor)

B. I, the undersigned, an engineer registered in the State of Ohio, hereby certify that the sediment control system described below has been constructed per the approved original/"as built"* (specify one) design specifications and criteria and that:

1. the embankment foundation area was cleared of all organic matter and the entire foundation surface scarified;
2. the fill material was free of sod, large roots, other large vegetative matter, frozen soil, and coal processing waste; and

the fill was brought up in horizontal layers of such thickness as required to facilitate compaction in accordance with prudent construction standards.



Donald M. Brafford Signature Date 7-31-02

If "as built," then "as built" plan must be attached to this certification.

This sediment control system consists of:

Sediment ponds no. 019, _____, _____, _____
Diversions (describe in relation to pond numbers).

Other control methods (describe if different from permit descriptions)

OHIO DEPARTMENT OF NATURAL RESOURCES
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ATTACHMENT 20
(SEDIMENTATION POND/IMPOUNDMENT DATA SHEET)

D-0425
AS-BUILT

Applicant's Name AMERICAN ENERGY CORPORATION Pond # 019

Type of impoundment EXCAVATED Permanent _____ Temporary ✓

1. POND DRAINAGE AREA DATA:

- a) Drainage area 4.0 acres
 b) Disturbed area 4.0 acres
 c) Ave. land slope 5 %
 d) Hydrologic soil group B
 e) Hydraulic length 685 ft.
 f) Cover/condition of the undisturbed area N/A

2. DESIGN STORM CRITERIA:

- a) Method:
- 1) Design method (s) including computer programs: SEDCAD 4.0
 - 2) SCS curve number 88
- b) Rainfall Amount/Peak Flow
- | | Rainfall, in. | Peak flow, cfs. |
|--|---------------|-----------------|
| 1) 10 year, 24 hour = | <u>3.7</u> | <u>9.6</u> |
| 2) 25 year, 24 hour = | <u>4.3</u> | <u>11.5</u> |
| 3) 50 year, 6 hour =
(if permanent) | _____ | _____ |
| 4) 100 year, 6 hour =
(if 20/20 size) | _____ | _____ |

3. POND SIZE:

- a) Dimensions:
- 1) Dam height 3.7 ft.
 - 2) Dam width 10 ft. (MIN)
 - 3) Dam length 385 ft.
 - 4) Dam downstream slope 50 % (MAX)
 - 5) Dam upstream slope 30 % (MAX)
 - 6) Core length 385 ft. 10 ft. 4 ft.
- b) Sediment storage volume 0.98 ac. ft. is provided below the 848.3 foot elevation.

c) Stage/Area Data:

	Elevation ft.	Surface Area ac.	Volume ac. ft.
1) Bottom of pond	<u>843.0</u>	<u>0</u>	<u>0</u>
2) Streambed at upstream toe:	<u>846.0</u>	<u>0.21</u>	<u>0.42</u>
3) Principal spillway inlet:	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>
4) Emergency Spillway Crest:	<u>848.3</u>	<u>0.28</u>	<u>0.98</u>
5) Top of embankment:	<u>849.7</u>	<u>0.35</u>	<u>1.36</u>

4. PRINCIPAL SPILLWAY: N/A

- a) Pipe length _____ ft.
- b) Pipe diameter _____ in.
- c) Pipe slope _____ %
- d) Riser diameter _____ in.
- e) Riser height _____ ft.
- f) Type of pipe _____
- g) Number of anti-seep collars _____ spacing along pipe _____ ft.
- h) Does the design include a trash rack? _____ Yes, _____ No.
- i) Does the design include an anti-vortex device? _____ Yes, _____ No.

5. EMERGENCY SPILLWAY/EXIT CHANNEL:

- a) Base width 13 ft.
- b) Design flow depth 0.2 ft. Depth in level section 0.4 ft.
- c) Exit slope 28 %
- d) Exit velocity 4.5 fps
- e) Channel lining ROCK RIPRAP
- f) Side slopes 2:1
- g) Freeboard 1.0 ft.
- h) Entrance slope 50 %
- i) Length of level section 11 ft.

6. The minimum static factor of safety for this impoundment is 1.5

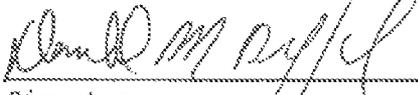
7. Provide as an addendum to this attachment a detailed plan view or 2 cross sections of the impoundment.

8. COMMENTS:

9. Is this an MSHA structure? _____ Yes, No. If "yes," provide the MSHA ID. number if one has been assigned _____

10. If this is to be retained as a permanent impoundment, submit an addendum to this attachment demonstrating compliance with rule 1501:13-9-04 (R) (2) of the Administrative Code.

11. I hereby certify that this impoundment is designed to comply with the applicable requirements of rule 1501:13-9-04 of the Administrative Code using current, prudent engineering practices.



Signature
7-31-02

